



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/616,639

07/09/2003

Sung-Gu Hwang

50266/DBP/Y35

3428

23363

7590

06/17/2004

CHRISTIE, PARKER & HALE, LLP

PO BOX 7068

PASADENA, CA 91109-7068

EXAMINER

TRAN, THUY V

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicant(s)	Applicant(s)	
	10/616,639	SUNG-GU HWANG, ET AL.	
	Examiner	Art Unit	
	Thuy V. Tran	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6-10 and 14-18 is/are rejected.
- 7) ☒ Claim(s) 2-5,11-13,19 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a response to the Applicants' filing on July 9th, 2003 and preliminary amendment filed concurrently. In virtue of this filing, claims 1-20 are currently presented in the instant application.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Inventorship

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Objections/ Minor Informalities

3. Claims 1-6, 8-14, and 18-20 are objected to because of the following informalities:

Claim 1, line 4, "the" should be changed to --a--;

Claim 1, line 6, "the" should be changed to --a--;

Claim 2, line 2, "the" should be changed to --a--;

Claim 3 should be reviewed and corrected, as it appears to be incomplete;

Claim 4, line 2, "the" should be changed to --a--;

Art Unit: 2821

Claim 5, line 1, "the" should be changed to --a--;

Claim 6, line 2, "rougher surface than" should be replaced with --surfaces rougher than a--;

Claim 8, line 1, "6" should be changed to --7--;

Claim 9, line 1, "6" should be changed to --7--;

Claim 10, line 4, "the" should be changed to --a--;

Claim 11, line 2, "the" should be changed to --a--;

Claim 12, line 2, "the" should be changed to --a--;

Claim 13, line 2, "the" should be changed to --a--;

Claim 14, line 2, "rougher surface than surface" should be replaced with --a surface rougher than that--;

Claim 18, line 6, "coil" should be changed to --core--;

Claim 18, line 9, "the" should be changed to --a--;

Claim 18, line 11, "the" should be changed to --a--;

Claim 19, line 2, "the" should be changed to --a--; and

Claim 20, line 2, "the" should be changed to --a--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Art Unit: 2821

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1, 6, 10, 14, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee (U.S. Patent No. 6,633,116).

With respect to claim 1, Lee discloses, in Fig. 3, a deflection yoke for a cathode ray tube including a ferrite core [44] having a funnel-shaped body (see Fig. 3), an inner surface, and an outer surface; the inner surface of a cross-section of the ferrite core [44] comprising (1) a first section [44c] having, along a length thereon, a shape of a circle with a predetermined, unvarying radius, (2) a second section [44b] having, along a length thereon, a shape of a circle with a varying radius; the second section [44b] being connected to the first section [44c], and (3) a third section [44a] having a non-circular shape and being connected to the second section.

With respect to claim 6, Fig. 3 of Lee shows that the first and second sections have surfaces rougher than a surface of the third section.

With respect to claim 10, Lee discloses, in Fig. 3, a deflection yoke for a cathode ray tube including a ferrite core [44] having a funnel-shaped body (see Fig. 3), an inner surface, and an outer surface; the inner surface of the ferrite core comprising (1) a first section [44b] having, along a length thereon, a shape of a circle with a varying radius, and (2) a second section [44a] having a non-circular shape and being connected to the first section [44b].

With respect to claim 14, Fig. 3 of Lee shows that the first section [44b] has a surface rougher than a surface of the second section [44a].

With respect to claim 18, Lee discloses, in Figs. 1-3, a cathode ray tube comprising (1) a substantially rectangular panel [1] (see Fig. 1), (2) a funnel [6] connected to the panel and having

Art Unit: 2821

a cone shape (see Fig. 1), (3) a neck connected to the funnel (see Fig. 1), (4) a deflection yoke [4] mounted to an outer circumference of the funnel (see Fig. 1), and (5) a ferrite core [44] mounted to a side of the deflection yoke, wherein the ferrite core includes a body having an inner surface, and an outer surface; the inner surface of a cross-section of the ferrite core [44] comprising (a) a first section [44c] having, along a length thereon, a shape of a circle with a predetermined, unvarying radius, (b) a second section [44b] having, along a length thereon, a shape of a circle with a varying radius; the second section [44b] being connected to the first section [44c], and (3) a third section [44a] having a non-circular shape and being connected to the second section (see Fig. 3).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7-9 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (U.S. Patent No. 6,633,116) in view of Yoshinaga et al. (U.S. Patent No. 6,703,801).

With respect to claims 7-8 and 15-16, Lee discloses all of the claimed subject matter, as expressly recited in claim 1, including a horizontal deflection coil [41] and a vertical deflection coil [42] (see Fig. 2B), except for an insulating member being interposed between, and having a shape similar to that of, the horizontal and the vertical deflection coils.

Yoshinaga et al. Discloses, in Fig. 1, a deflection yoke comprising an insulating member [20] interposed between, and having a shape similar to that of, a horizontal deflection coil [1] and a vertical deflection coil [3].

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the deflection yoke of Lee by arranging an insulating member between, and having a shape similar to that of, the horizontal and vertical deflection coils to completely avoid the interference of the electromagnetic field generated by the coils since such a configuration of the insulating member for the stated purpose has been well known in the art as evidenced by the teachings of Yoshinaga et al. (see Fig. 1).

With respect to claims 9 and 17, Fig. 2B of Lee shows that the horizontal and vertical deflection coils [41, 42] include a pair of coil members.

Allowable Subject Matter

8. Claims 2-5, 11-13, and 19-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose or fairly suggest:

- A deflection yoke for a cathode ray tube, wherein the third section of the inner surface has a shape of interconnected segments of three circles and each is of a different radius, in combination with the remaining claimed limitations as called for in claim 2 (claim 3 would be allowable since it depends on claim 2);

Art Unit: 2821

- A deflection yoke for a cathode ray tube, wherein the third section of the inner surface has a shape of a segment of a circle and two substantially straight lines, in combination with the remaining claimed limitations as called for in claim 4;
- A deflection yoke for a cathode ray tube, wherein the third section of the inner surface has a shape of interconnected segments of three circles and two substantially straight lines, in combination with the remaining claimed limitations as called for in claim 5;
- A deflection yoke for a cathode ray tube, wherein the second section of the inner surface has a shape of interconnected segments of three circles and each is of a different radius, in combination with the remaining claimed limitations as called for in claim 11;
- A deflection yoke for a cathode ray tube, wherein the second section of the inner surface has a shape of a segment of a circle and two substantially straight lines, in combination with the remaining claimed limitations as called for in claim 12;
- A deflection yoke for a cathode ray tube, wherein the second section of the inner surface has a shape of interconnected segments of three circles and two substantially straight lines, in combination with the remaining claimed limitations as called for in claim 13;
- A cathode ray tube, wherein the third section of the inner surface has a shape of interconnected segments of three circles and each is of a different radius, in combination with the remaining claimed limitations as called for in claim 19; and

Art Unit: 2821

- A cathode ray tube, wherein the third section of the inner surface has a shape of a segment of a circle and two substantially straight lines, in combination with the remaining claimed limitations as called for in claim 20.

Citation of relevant prior art

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Taniwa et al. (Pub. No.: US 2003/0025468 A1) discloses a deflection yoke and a CRT.

Prior art Park et al. (U.S. Patent No. 6,509,681) discloses a deflection yoke for a color CRT.

Prior art Kim et al. (Pub. No.: US 2002/0140337 A1) discloses a deflection yoke and a CRT.

Prior art Kim et al. (Pub. No.: US 2002/0084739 A1) discloses a deflection yoke and a CRT.

Prior art Dasgupta (U.S. Patent No. 6,380,698) discloses a deflection yoke and a CRT.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2821

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thuy V. Tran
Examiner
Art Unit 2821

T.T.
06/12/2004

A handwritten signature in black ink, appearing to read 'Thuy V. Tran', is written over the printed name and title.